Afferton 2003-0075

REMARKS

Claims 1-20 were rejected under 35 USC 112, first paragraph because, according to the Examiner, the limitation of an optical director element having bi-directional input ports is new matter. Applicants respectfully traverse.

The first paragraph of the Detailed Description teaches the following:

> FIG. 3 illustrates one embodiment in accord with the principles disclosed herein. It includes a tunable transceiver 127, which is a bi-directional transponder device that is tunable pursuant to an applied control signal. A first port of transceiver 127 is extended to customers, and a second port of transceiver 127 is coupled to optical director 117. Information applied to the first port is communicated to the second port, modulated onto a particular wavelength as specified by the control signal. Information appearing at the second port, when modulated onto the particular wavelength, is communicated to the first port.

Clearly, the above teaches that transceiver 127 is a bi-directional transponder that operates under control of a control signal. A transponder is a device that transmits a signal in response to a received signal. From FIG. 3 it is clear that port transceiver 127 has only two signal ports: one that is connected to customers, and one that is connected to optical director 117. There is no teaching whatsoever of any processing being performed in transceiver 127 and, therefore, there is not even a suggestion of a customer device sending a signal to transceiver 127 and transceiver 127 responding directly (i.e., without some communication elsewhere). Indeed, the natural and actually the only plausible mode of operation for the FIG. 3 arrangement (and which clearly comports with the remainder of the specification) is that a signal received from the customer equipment causes a transmission (is transponded) to the optical director, and a signal that is received from the optical director to transponder 127 causes transmission to the customer device. In other words, the port of optical director 117 that connects to transponder 127 is a "bi-directional" port. Since this port is a "bi-directional" port, it follows that the port to which this port is connected, i.e., a port of optical director 117, is also a "bi-directional" port. Since this bi-directional port of optical director 117 is the port through which local customer equipment can be coupled to the network links that connect to NYC, Atlanta, and Pittsburgh, it is quite reasonable to call this port a "local" port. Combining this with the observation that FIG. 4 shows a plurality of such local ports, it is respectfully

submitted that the specification provides clear support for the notion that the optical director has "'bi-directional' local input ports."

Independently of the above, the Examiner's attention is respectfully directed to at least claim 21 which, *inter alia*, specifies a bi-directional port and which is part of the application as filed. An analysis of the claim is presented below in connection with remarks traversing the rejection of claim 21.

Since claim 1, as previously amended, specified "bi-directional" ports, it may be somewhat confusing to call these ports "input" ports, so claim 1 and some of the independent claims are amended to remove this possible confusion.

In point 5 the Examiner states, in part, "Claims 21-, and 43-44 are rejected under 35 USC 112, second paragraph, as being indefinite...." Obviously, something is missing. Moreover, no explanation is given for the rejection; but that, per se, is not unusual because, typically, the following point provides the explanation, In point 6, however, the Examiner states "As to independent claim 1,..." Since point 5 does not mention claim 1, point 6 becomes unclear. Points 5 and 6 are treated as a rejection of claim 1 and the claims that depend on claim 1, as well as a rejection of the claims mentioned in point 5, based on the assertion that there is no disclosure in the specification of an optical director element with bin-directional local input port.

Applicants traverse the rejection, and respectfully direct the Examiner's attention to the argument above relative to the rejection under 35 USC 112, first paragraph.

Claims 21, 23-29 and 41-45 were rejected under 35 USC 102 as being anticipated by Sutter et al, US Patent 5,760,934. Applicants respectfully traverse.

Claim 21 specifies a transceiver pool and N ODS (optical Director Side) connection points associated with the transceiver pool. It also specifies that the transceiver pool delivers to one such local port an information-bearing signal (call it an output signal), and that the transceiver pool accepts an information-bearing signal "from said corresponding ODS connection point" (call it an input signal). That is, the very same ODS connection point delivers an output signal and accepts an input signal. Both the input and the output signals are information-bearing. The claim specifies, additionally, that the output signal is at a wavelength specified by the control signals, and that the information in the information-bearing output signal is "substantially the same as

information provided to said transceiver pool from a Customer Side (CS) connection point."

What claim 21 specifies, therefore, (in addition to the above) is that at least the one ODS referred to by the claim is bi-directional. Sutter et al has no "connection point" that is bi-directional.

In rejecting claim 21, the Examiner asserts a number of correspondences. The Examiner asserts that the "pool of aggregated interface O" is the first transceiver pool of claim 21, that the first optical director of claim 21 corresponds to ME1 (see lines 1 and 5-7 of the first paragraph at page 5 of the Office action (OA)), that I4N and I1N are the "local ports" (and the ODS ports) of claim 21, and that X1S and X4S are the "non-local ports" of claim 21 (and the customer side connection points).

Respectfully, the correspondences fail. First, the "pool of aggregated interface O" is either part of ME1, so intimately connected to ME1 that no connection paths are shown between the small boxes of "interface O" and the ME1 box in any of the FIGS. in the reference. There is no teaching as to what elements are contained in the small boxes, or within the box marked ME1, so it is not even clear precisely what functions each of the boxes performs. Second, X1S and X4S are not ports, as asserted by the Examiner. They are tunable filters. Please see col. 7, lines 41 and 60. Third, it is not reasonable to assert that I4N and I1N are "local" ports because while I4N is connected to the aggregated interface O, I1N is NOT so connected. It is not even possible to assert that I1N is associated with the aggregated interface O. Fourth, at page 12 of the OA (at lines 1-2) the Examiner also asserts that ports X4N and X1N are bi-directional input ports. Aside from the fact that they are not ports at all but, rather, each is a tunable filter, each filter is clearly not bi-directional. As shown, signals flow only in one direction and there is no teaching to suggest otherwise. As an aside, the Examiner is asserting that there is tuning by a tunable filter, but in support of the assertion the Examiner cites col. 10, lines 49-59. The cited text states, however:

> Management means G are then provided for controlling the wavelength-tunable filters.
>
> This gives a network implemented with standard electronic equipments, but whose architecture can be optically reconfigured. It is then possible to modify the links between the nodes as a function of the traffic.

> For example, on the basis of an architecture in which a link is established between the nodes N1 and N2 at the wavelength $\lambda 1$, it is possible to pass to an architecture where a link is established between the nodes N1 and N3 at this wavelength.

Respectfully, this passage does not teach filters – tunable or otherwise – and does not teach tuning.

In a nutshell, aside from the fact that the correspondences do not properly match, there are simply no bi-directional ports in Sutter et al and, therefore, claim 21 and all claims that depend on claim 21 are not anticipated by Sutter et al.

Notwithstanding the fact that claim 21 is not anticipated by Sutter et al, it is amended herein to streamline it and to thereby make it clearer. As amended, it is still not anticipated by Sutter et al.

Claim 1-14, 20, and 22 were rejected under 35 USC 103 as being unpatentable over Sutter. Applicants respectfully traverse. The Examiner asserts that Sutter et al merely fail to disclose that the electrical control signal is applied to the transceiver, and that this is obvious. As indicated above, however, the Sutter et al arrangement does not correspond to the arrangement of claim 1, and also clearly fails the "bi-directional" limitation of claim 1. Therefore, it is respectfully submitted that claim 1, and all of the claims that depend on claim 1, are not obvious in view of Sutter et al.

The same rationale applies to claim 22.

It is noted that at point 11 of the OA the Examiner makes reference (4 lines from the bottom) to "MS." Applicants were unable to find this reference in any of the FIGS. of the reference. The Examiner's assistance is requested.

It is also noted that the Examiner is now asserting, at line 1 of page 12, that MO1 corresponds to the optical director element of the claims. In the rejection under 35 USC 102 (discussed above) the Examiner asserted that element ME1 corresponds to the optical director element, but elements ME1 and MO1 are not the same element. Respectfully, the Examiner needs to decide which element the Examiner chooses to assert that it corresponds to the "optical director" element, and stick with that decision.

Taking MO1 as the asserted optical director element, the Examiner asserts that elements X4N and X1N form two ODS connection points, and that elements I1S and MS correspond to the "at least two other ports" of claim 1. Again, applicants are constrained

to point out that elements X4N, X1N, and I1S are tunable filters and not connection points. As for the correspondences asserted by the Examiner, applicants believe that asserting MO1 as the optical director element is a more fitting assertion that asserting ME1 as the optical director. Also, if the Examiner's assertion is modified to assert that the connection to X4N corresponds to an ODS connection point (rather than X4N proper) then the assertion would also be more fitting. Still, even in the modified form the assertion that the connection to I1S corresponds to a "local" port and also to one of the "other ports" (page 5, line 4 of the OA) does not make sense. This is particularly so since the claim specifies adding a signal applied to one of ODS connection points (e.g., X4N), at said particular wavelength, to a specific one of the other ports (e.g., I1S), via all optical paths, without affecting signals of other wavelengths that are applied by the optical director element to that specific one of the other ports (i.e., I1S). In other words, the claims specifies that a signal sent at the connection of X4N to aggregated interface O (at $\lambda 4$) is added to the connection point entering MO1 from aggregated interface O at I4S, via all optical paths, without affecting signals of other wavelengths that are applied to the same connection point by the optical director. However, there is no teaching in Sutter et al to suggest that going through aggregated interface O is via "all optical paths." Further, the optical director does NOT apply any signal to that connection point. Rather, that connection point is used solely to provide a signal at $\lambda 4$ **TO** MO1. Hence, I4S does not quality as one of the "other ports" of the "optical director" embodied by MO1, and the set of correspondences asserted by the Examiner does not fit.

Claim 15 was rejected under 35 USC 103 as being unpatentable over Sutter et al in view of May, US Patent Application Publication 20060275034. Applicants respectfully submit that the limitations of claim 1 that render it not obvious in view of Sutter et al are not taught by the May reference (and the Examiner is not asserting that they are taught) and, therefore, the combination of Sutter et al and May does not render claim 15 obvious.

Claims 18-19 were rejected under 35 USC 103 as being unpatentable over Sutter et al in view of Liu, US Patent Application Publication 20020149820. Applicants respectfully submit that the limitations of claim 1 that render it not obvious in view of Sutter et al are not taught by the Liu reference (and the Examiner is not asserting that

they are taught) and, therefore, the combination of Sutter et al and Liu does not render claims 18 and 19 obvious.

Claims 16 – 17 were rejected under 35 USC 103 as being unpatentable over Sutter et al in view of Gumaste et al, US Patent Application Publication 20040208560. Applicants respectfully submit that the limitations of claim 1 that render it not obvious in view of Sutter et al are not taught by the Gumaste et al reference (and the Examiner is not asserting that they are taught) and, therefore, the combination of Sutter et al and Gumaste et al does not render claims 18 and 19 obvious.

Claims 30-40 were rejected under 35 USC 103 as being unpatentable over Sutter et al in view of Okanoya et al, US Patent 6,128,657. Applicants respectfully submit that the limitations of claim 1 that render it not obvious in view of Sutter et al are not taught by the Okanoya et al reference (and the Examiner is not asserting that they are taught) and, therefore, the combination of Sutter et al and Okanoya et al does not render claims 30-40 obvious.

In light of the above amendments and remarks, applicants respectfully submit that all of the rejections and objections have been overcome. Reconsideration and allowance are respectfully solicited.

Respectfully,
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